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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/927,328	08/13/2001	Chicara Kawamura	2001_1140A	4689

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EXAMINER

WYROZEBSKI LEE, KATARZYNA I

ART UNIT	PAPER NUMBER
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1714

DATE MAILED: 06/20/2003

5

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/927,328

Applicant(s)

KAWAMURA ET AL.

Examiner

Katarzyna Wyrozebski Lee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2,4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## DETAILED ACTION

### *Double Patenting*

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1-10 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-33 of copending Application No. 10/107437. Although the conflicting claims are not identical, they are not patentably distinct from each other because of the following explanation.

The co-pending application '437 discloses process for recycling alkyd resin, re-polymerizing it to obtain paint composition. The alkyd resin according to claim 12 of '437 is polyester resin. The resulting polyester according to further claim 21 has number average molecular weight of 2,000-24,000, a hydroxyl value in a range of 0.1-150 mg KOH/g and acid value of 0.1-150 mg KOH/g.

Recycled resin is repolymerized in mixture of polyhydric alcohol and polyhydric acid (claim 4). The content of the recycled polyester is 10-35 wt % by the weight of the total composition.

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Polyhydric alcohol is selected from glycols and diols such as ethylene glycol, diethylene glycol and the like (claims 7-9). The polyhydric acid is selected from terephthalic acid, phthalic acid, isophthalic acid and the like (claim 11).

The polyester is depolymerized in presence of a catalyst. Depolymerization catalyst is listed in claim 16 of co-pending application. According to the steps of the process in claims 1-4, the catalyst is not removed from the depolymerization medium.

Although the co-pending application describes the process in more specific way than the present invention, one of ordinary skill in the art would arrive at the co-pending application when practicing present claims. The properties of the resulting polymer of the present invention lie squarely in the middle of the properties taught by the co-pending application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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4. Claims 1-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Fisher (US 5,552,478).

The prior art of fisher discloses a low profile additive to the molding compositions comprising recycled polyester. In col. 4 additive number 4 is first formed by glycolysis of PET in presence of diethylene glycol and adipic acid. To glycolized PET is then mixed with more adipic acid was added and formed polymer had acid value of 25 and hydroxyl value of 3-4 with number average molecular weight of 9930. Since the particular additive number 4 did not contain table and the amounts, the examiner would like to point the applicant to low profile additive number 7. PET is utilized in 1291.6 g, glycols in 708.4 g and acid in 1004.0 g. PET therefore is utilized in 42% based on the total amount of PET, glycols and acid.

Table 2 (col. 10), further depicts satisfactory results of the polyester from terephthalic acid and ethylene glycol.

In the light of the above disclosure the prior art of Fisher anticipates claims rejected above.

5. Claims 1-7 are rejected under 35 U.S.C. 102(e) as being anticipated by Yasumura (US 6,353,036).

The prior art of Yasumura discloses process for depolymerization of the PET and addition to the depolymerized PET polyhydric alcohol and polybasic acid wherein the resulting polymer has acid value of 100 mg KOH/g or higher, wherein value of 100 is within scope of the

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present invention. Upon reaction with acid and alcohol the acid value according to the examples decreased to 28 (see example 2)

Although the prior art of Yasumura does not specifically disclose the hydroxyl value and number average molecular weight, such properties would be inherent to the recycled polymer, since they are all directly proportional to each other.

Polybasic acids of the prior art of Yasumura include terephthalic acid, maleic acid, isophthalic acid and the like (col. 4, lines 41-55).

Polyhydric alcohols include glycol and diols such as ethylene glycol, propylene glycol and the like (col. 4, lines 20-30).

The polyester is depolymerized in presence of catalyst, and at the same time the prior art of Yasumura does not teach purification of the recycled monomers, therefore the re-polymerization step is performed neat in presence of the catalyst (see examples).

When considering the amounts of the components utilized in the process, the PET waste is utilized in the amount of 2 moles, and total amount of glycol is 3.6 moles, the PET content is then 55% (example 1). Acid is added in an amount required to afford polycondensation and formation of the polyester (0.1g), which is  $0.1/110.110 = 0.09$  mole. The total amount of polyester is then approximately 55 %.

In the light of the above disclosure, the prior art of Yasumura anticipates claims rejected above.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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9. Claims 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fisher (US 5,552,478) or Yasumura (US 6,353,036) either one of which in view of Salzman (US 5,726,277).

The discussion of the disclosure of the prior art of Fisher or Yasumura from paragraphs 4 and 5 of this office action is incorporated here by reference.

The difference between the present invention and the prior art of Fisher or Yasumura is use of the composition in the paint.

With respect to the above difference, the prior art of Salsman discloses recycled PET, which also just like in the prior art above subjects the polyester waste to glycolysis and reacts it with an acid to form recycled polyester (see examples).

The recycled polyester of the prior art of Salsman as the Abstract indicates is utilized to make coatings, wherein pain can be viewed as coating. The composition is dispersion or emulsion (col. 3, lines 21-50).

Although the prior art of Salsman does not disclose the properties of the recycled polyester such as acid value, hydroxyl value or number average molecular weight, the examples utilize the recycling process that is very similar to that of the prior art of Fisher or Yasumura.

In the light of the above disclosure it would have been obvious to one having ordinary skill in the art at the time of the instant invention to utilize recycled polyester of Fisher or Yasumura in the composition of Salsman and thereby obtain the present invention. Composition of Salsman utilizing the polyester of Fisher or Yasumura would provide good coating composition.



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The prior art of Oguri was also found during the search. Although very relevant to the present claims it cannot be applied in a rejection, since it does not qualify as a prior art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Katarzyna Wyrozebski Lee whose telephone number is (703) 306-5875. The examiner can normally be reached on Mon-Thurs 6:30 AM-4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (703) 306-2777. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

  
KIWL  
June 17, 2003